



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,262	03/16/2001	Toru Tsukada	Q63051	6379

7590 11/23/2001

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037-3213

EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
3682	

DATE MAILED: 11/23/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/809,262	TSUKADA ET AL.
Examiner	Art Unit	
Chong H. Kim	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 March 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 17-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 08/877,518.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1
- 4) Interview Summary (PTO-413) Paper No(s) _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group VI, Figs. 19 and 20, in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17, 18, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Brande, U.S. Patent 4,795,172.

Brande shows, in Figs. 1 and 2, a feed screw device comprising;
a screw shaft 11;
a nut member 14 threadably engaging an outer periphery of the screw shaft 11;
a lubricant supplying device 55 (since the seal 55 is made of a felt material which aids in distributing and keeping the lubricant within the nut 14) having an insertion hole 60 formed in an outer periphery side thereof, the lubricant supply device 55 coming in contact with the outer peripheral surface of the screw shaft 11;

a retaining ring 59 for retaining the lubricant supply device 55;
a projection 57 formed on the retaining ring 59 and disposed so as to be received in the insertion hole 60;
in which the nut member 14 is provided with a recess portion 24, wherein the retaining ring 59 retains the lubricant supply device 55 within the recess portion 24; and
wherein the retaining ring 59 is fixedly secured to the nut member 14, and the projection 57 formed on the retaining ring 59 prevents the lubricant supply device from rotating with the screw shaft 11.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Brande, U.S. Patent 4,795,172 in view of Wysong, U.S. Patent 3,669,460.

Brande shows, as discussed above in the rejection of claim 17, the feed screw device comprising the lubricant supply device, but fails to show a cut part in the circumferential direction and a spiral projection in the lubricant supply device.

Wysong shows, in Fig. 8, a seal device 20 having a cut part in the circumferential direction and a spiral projection formed on an inner peripheral surface which fits into a thread groove 25 of the screw shaft 13.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the lubricant supply device of Brande with the cut part and spiral projection sealing device as taught by Wysong in order to provide a more complete sealing device so that the leakage of the lubricant is prevented thus saving money.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brande, U.S. Patent 4,795,172 in view of Tsukada et al., U.S. Patent 5,769,543.

Brande shows, as discussed above in the rejection of claim 17, the feed screw device comprising the lubricant supply device which come in sliding contact with the outer peripheral surface of the screw shaft, but fails to show the contacting surface of the lubricant supply device having a plurality of lip parts.

Tsukada et al. shows, in Fig. 40, a lubricant supply device 63 comprising a plurality of lip parts L₂ projecting toward the sliding surface 3.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the lubricant supply device of Brande with the lip parts of Tsukada et al. in order to provide a better lubricating and sealing device where sliding surface is not smooth so that the efficiency of linear movement of the screw device is increased.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lubricant supply device made of lubricant containing polymer.

Yabe et al., U.S. Patent 5,772,333

Oyagi et al., U.S. Patent 5,851,675

Lubricant supply device having lip parts.

Erdal, U.S. Patent 5,207,794

Davis et al., U.S. Patent 5,527,462

Lubricant supply device disposed within nut member.

Westling, U.S. Patent 2,606,454

Cole, U.S. Patent 3,132,719

Kasuga, U.S. Patent 5,454,278

Sugihara et al., U.S. Patent 5,695,288

Nilsson, U.S. Patent 3,532,004

Jelinek, U.S. Patent 4,053,167

Lubricant supply device having cut portion.

Spontelli, U.S. Patent 2,818,745

Klinkenberg, U.S. Patent 5,178,029

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Monday - Friday; 9:00 - 6:00.

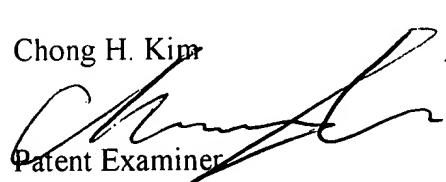
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone numbers for the

Art Unit: 3682

organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Chong H. Kim



Patent Examiner

November 7, 2001